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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,486	05/23/2001	Qiming Chen	10005118-1	9335

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EXAMINER

MASKULINSKI, MICHAEL C

ART UNIT	PAPER NUMBER
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2113

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/863,486

Applicant(s)

CHEN ET AL

Examiner

Michael C. Maskulinski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 8-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 17 and 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Final Office Action

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 21-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. A system of software agents is functional descriptive material that is neither concrete nor tangibly embodied.

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 21 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by McCoy et al., US 2001/0037311 A1.

Referring to claim 21:

- a. In paragraph 0012, McCoy et al. disclose that the invention affords a distributed system for publishing and retrieving content in a network. The invention includes a plurality of computer systems connected together in a peer-to-peer fashion, and one or more agent applications are associated with the computer systems for allowing the computer systems to publish and retrieve content from the network (a plurality of software agents that process multi-agent

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cooperative business transactions, wherein each agent is configured to autonomously make decisions that affect completion of a business transaction).

b. In paragraph 0089, McCoy et al. disclose that the invention provides an infrastructure of a distributed society of independent agents, that maintains a higher degree of reliability and fault tolerance (a failure handler coupled to the failure detector for performing failure recovery). A failure detector that detects if a business transaction fails is inherent to a system that is fault tolerant.

Referring to claim 22, in paragraph 0009, McCoy et al. disclose that the invention provides a distributed architecture where each portion of published content may be divided into numerous of small fragments, and scattered amongst the peer systems in the network. Retrieval of data may be accomplished by downloading the contents in parallel, locating a replica of an original fragment if a particular peer system serving the original fragment becomes overloaded or disconnected from the network (the plurality of software agents communicate based on a peer-to-peer mechanism that enables an agent to delegate a task to another agent and to copy information that is to be delegated to said other agent).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirch, U.S. Patent 6,324,161 B1, and further in view of Carothers et al., US 2002/0069117 A1.

Referring to claims 1 and 17:

- a. In column 1, lines 29-31, Kirch discloses that data communication networks can be used for business. However, Kirch doesn't explicitly disclose a multi-agent cooperative business transaction between software agents of at least two enterprises or that each agent is configured to autonomously determine whether to complete a transaction. In paragraph 0012, Carothers et al. disclose conducting transactions over an electronic marketplace, and in paragraph 0074 Carothers et al. disclose mobile agents for the business transactions. It would have been obvious to one of ordinary skill at the time of the invention to include the business transactions of Carothers et al. into the system of Kirch. A person of ordinary skill in the art would have been motivated to make the modification because the system of Carothers et al. enables buyers and sellers to directly conduct transactions with each other (see Carothers et al.: paragraph 0008). In Figures 3b and 3c, Kirch discloses a failure being detected between two LANs (an inter-enterprise failure) and a failure being detected within a LAN (an intra-enterprise failure).
- b. In column 23, lines 12-15, Kirch discloses that FIG. 3c once again illustrates LAN 20 from FIG. 3a, but in this instance a failure is located within LAN

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40 as shown by the "X" designated at F3 as opposed to a failure between routers as is the case in FIG. 3b. Further, in column 23, lines 21-26, Kirch discloses rerouting upon failure (an intra-enterprise failure handler coupled to the failure detector for performing failure recovery for intra-enterprise failures).

c. In column 21, lines 62-67 continued in column 22, lines 1-9, Kirch discloses that FIG. 3b illustrates once again illustrates WAN 20 in the identical manner of FIG. 3a, but further adds an illustration of a failure F2 along line L2. Given the above steps and considering node A by way of example, one skilled in the art will appreciate that node A will fail to receive, within its timeout interval, a heartbeat packet from IP address 10.5.9.1 of node C and also from IP address 10.5.9.2 of node D. Thus, for each of these detected failures step 100 will repeat (with such repetition including steps 88, 94, and 96 as well) and for each repetition the re-routed process will modify node A's route table to include a remote host route which permits redirection of information to the dual communication path and thereby to circumvent the detected failure (an inter-enterprise failure handler coupled to the failure detector for performing failure recovery for inter-enterprise failures).

7. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCoy et al., US 2001/0037311 A1 as applied to claim 21 above, and further in view of Rosen, U.S. Patent 6,122,625.

Referring to claim 23, in paragraph 0010, McCoy et al. disclose distributed load balancing for transactions. However, McCoy et al. don't explicitly disclose that each

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agent logs hierarchies of related transactions and recovers a logged transaction if a failure occurs. In column 40, lines 24-35, Rosen discloses logging transactions so that they can be rolled back in the case of an abort. It would have been obvious to one of ordinary skill at the time of the invention to include the transaction logging of Rosen into the system of McCoy et al. A person of ordinary skill in the art would have been motivated to make the modification because transaction logging enables a system such as a banking system to roll back any changes in the case of an abort. This prevents any unintentional changes to a user's account.

8. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCoy et al., US 2001/0037311 A1 as applied to claim 21 above, and further in view of Greene et al., US 2002/0147611 A1.

Referring to claim 24, in paragraph 0010, McCoy et al. disclose distributed transactions. However, McCoy et al. don't explicitly disclose that the software agents communicate based on a peer-to-peer mechanism that includes a preliminary commit stage and a final commit stage. In paragraph 0277, Greene et al. disclose a two-phase commit. It would have been obvious to one of ordinary skill at the time of the invention to include the two-phase commit of Greene et al. into the system of McCoy et al. A person of ordinary skill in the art would have been motivated to make the modification because the two-phase commit enables the transactions to be rolled back and ensures that no participant has partially completed the transaction (see Greene et al.: paragraph 0277).

Allowable Subject Matter

9. Claims 2-7, 18-20, 25-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments with respect to claims 1, 17, and 21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Maskulinski whose telephone number is (571) 272-3649. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W. Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MM


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